

Amendment to the Claims

Please amend the claims as follows:

1. (Cancelled)
2. (New)      A method for determining a topology of  
a network, the method comprising:  
communicating with a first router in the network;  
querying a first link state database of the first router for first Type 1 and Type 2 link state  
advertisements in a first area; and  
importing the Type 1 and Type 2 link state advertisements into a network topology  
information database.
3. (New)      The method as recited in claim 2, further comprising:  
querying the first router for a router identifier; and  
determining a number of areas connected to the first router.
4. (New)      The method as recited in claim 2, further comprising importing into the  
network topology information database additional topology information for all networks directly  
connected to the first router.
5. (New)      The method as recited in claim 2, further comprising:  
querying the first link state database for each respective area connected to the first router  
to determine respective Type 1 and Type 2 link advertisements for the respective areas; and

importing into the network topology information database, the respective Type 1 and Type 2 link state advertisements.

6. (New) The method as recited in claim 2, further comprising:  
sweeping all networks in the first area announced by the first router and which make Type 3, Type 4, Type 5 or Type 7 announcements.

7. (New) The method as recited in claim 6, wherein when the sweeping locates a second router, the method further comprises:  
communicating with the second router;  
querying a second link state database of the second router for second Type 1 and Type 2 link state advertisements in a second area; and  
importing the second Type 1 and Type 2 link state advertisements into the network topology information database.

8. (New) The method as recited in claim 2, further comprising sweeping all networks in the first area announced by the first router and which do not make Type 3, Type 4, Type 5 or Type 7 announcements.

9. (New) The method as recited in claim 8, wherein when the sweeping locates a second router, the method further comprises:  
communicating with the second router;

querying a second link state database of the second router for second Type 1 and Type 2 link state advertisements in a second area; and

importing the second Type 1 and Type 2 link state advertisements into the network topology information database.

10. (New) The method as recited in claim 7, further comprising sweeping all networks in the second area announced by the second router and which do not make Type 3, Type 4, Type 5 or Type 7 announcements.

11. (New) The method as recited in claim 10, wherein when the sweeping locates a third router, the method further comprises:

communicating with the third router;

querying a third link state database of the third router for third Type 1 and Type 2 link state advertisements in a third area; and

importing the third Type 1 and Type 2 link state advertisements into the network topology information database.

12. (New) A method for determining a topology of a network, the method comprising:

communicating with a first router in the network;

querying a first link state database of the first router for first Type 1 and Type 2 link state advertisements in a first area;

importing the first Type 1 and Type 2 link state advertisements into a network topology information database;

querying the first router for a first area identifier;

determining whether the first router is an autonomous system boundary router based on the first area identifier; and

when the first router is an autonomous system boundary router, querying the first router for networks directly connected to the first router and ignoring all other Type 5 announcements in the first link state database.

13. (New) The method as recited in claim 12, further comprising:

parsing the first link state database for a second router in the first area having a second link state database and providing Type 3, Type 4 or Type 5 announcements in the first area;

communicating with the second router;

when the second router is in a second area,

querying the second link state database of the second router for second

Type 1 and Type 2 link state advertisements in the second area, and

importing the second Type 1 and Type 2 link state advertisements into the network topology information database;

querying the second router for a second area identifier;

determining whether the second router is an autonomous system boundary router based on the second area identifier; and

when the second router is an autonomous system boundary router, querying the second router for networks directly connected to the second router and ignoring all other Type 5 announcements in the second link state database.

14. (New) The method as recited in claim 12, further comprising:

parsing the first link state database for a second router in the first area having a second link state database and providing Type 3, Type 4 or Type 5 announcements in the first area;

communicating with the second router;

when the second router is in a second area,

querying the second link state database of the second router for second Type 1 and Type 2 link state advertisements in the second area, and

importing the second Type 1 and Type 2 link state advertisements into the network topology information database;

querying the second router for a second area identifier;

determining whether the second router is an area border router based on the second area identifier; and

when the second router is an area border router, querying the second router for other areas bordered by the second router, and

importing topologies of the networks in the other areas into the network topology information database.

15. (New) A method for determining a topology of a network, the method comprising:

- communicating with a first router in the network;
- querying a first link state database of the first router for first Type 1 and Type 2 link state advertisements in a first area;
- importing the first Type 1 and Type 2 link state advertisements into a first network topology information database;
- querying the first router for a first area identifier;
- determining whether the first router is an area border router based on the first area identifier; and
- when the first router is an area border router, querying the first router for other areas bordered by the first router, and
- importing topologies of the networks in the other areas into the network topology information database.

16. (New) The method as recited in claim 15, further comprising:

- parsing the first link state database for a second router in the first area having a second link state database and providing Type 3, Type 4 or Type 5 announcements in the first area;
- communicating with the second router;
- when the second router is in a second area,
- querying the second link state database of the second router for second Type 1 and Type 2 link state advertisements in the second area, and

importing the second Type 1 and Type 2 link state advertisements into the  
 second network topology information database;  
 querying the second router for a second area identifier;  
 determining whether the second router is an area border router based on the second area  
 identifier;  
 determining whether the second router is an autonomous system boundary router based  
 on the second area identifier;  
 when the second router is an autonomous system boundary router, querying the second  
 router for networks directly connected to the first router and ignoring all other Type 5  
 announcements in the second link state database.

17. (New) The method as recited in claim 15, further comprising:  
 parsing the first link state database for a second router in the first area having a second  
 link state database and providing Type 3, Type 4 or Type 5 announcements in the first area;  
 communicating with the second router;  
 when the second router is in a second area,  
     querying the second link state database of the second router for second  
     Type 1 and Type 2 link state advertisements in the second area, and  
     importing the second Type 1 and Type 2 link state advertisements into the  
     network topology information database;  
 querying the second router for a second area identifier;  
 determining whether the second router is an autonomous system boundary router based  
 on the second area identifier; and

when the second router is an autonomous system boundary router, querying the second router for networks directly connected to the second router and ignoring all other Type 5 announcements in the second link state database.